section to be lacking in Bobry. 35 U.S.C. 102 states that "a person is entitled to patent unless ...(e) the invention was described in a patent granted on an application for patent ...". The Office Action states that these missing elements are either "inherent" or "implicit", which, as described above is believed to be incorrect. Therefore, it is believed that the rejection under 35 U.S.C. 102(e) is not well founded and should be withdrawn.

Concerning claims 4, 13-19, and 20-24, it is also respectfully submitted that the Office Action is again improperly interpreting the Bobry patent in light of the present application. As described in the previous Amendment, each of these claims contains elements not found in Bobry and that a rejection under 35 U.S.C. 102(e) is improper. Bobry provides no disclosure of the device of claim 4 of the present application, namely an output through the speaker in response to an input from the speaker where all of the various noted elements (save the speaker) are part of the integrated circuit. There is also no disclosure of this output being applied to the same integrated circuit pin as that on which the input signal was received, as is found in claims 13-19 and claims 20-24. In the Response to Arguments for claims 4, 13-19, and 20-24, it is stated the embodiments described in Bobry are only examples of that patent's teachings. However, it is respectfully submitted to be improper to extend the teaching of Bobry to a circuit topology that is neither described nor suggested in Bobry, but instead seems to be based upon hindsight gained from the present application.

Additionally, the Office Action also appears to be making improper assumptions in the Response to Arguments when it states "Clearly, a command from the user is required to change from record mode to playback mode" when no such process is described in the cited reference. The Response to Arguments then reaches the conclusion that invention as contained in these claims follows from these multiple improper assumptions. However, as this conclusion is predicated upon finding elements in Bobry which are not found there, a rejection of claims 4, 13-19, and 20-24 based upon 35 U.S.C. 102(e) is not believed to be well founded and should be withdrawn.

Concerning claims 5-6, 8-9, and 17, the Response to Arguments states "Bobry clearly teaches the desirability of including multiple functions into a single integrated circuit (col. 14, lines 41-48)." It is respectfully submitted that the cited location in Bobry only states certain combinations of some elements may conventionally be found combined into a integrated circuit, but does not suggest or imply combining into a single integrated circuit all of the particular combinations elements found in any of claims 5-6, 8-9, and 17. The Office Action again appears to be improperly interpreting the disclosure of Bobry with hindsight

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based upon the present application. Therefore, a rejection under 35 U.S.C. 102(e) is not believed to be well founded and should be withdrawn.

Therefore, in all of the pending original claims rejected under 35 U.S.C. 102(e) (claims 2, 4-6, 8-9, 13-17, and 20-21), the Office Action notes in its Response to Arguments at least one element that is missing in the cited reference and then issues a 102(e) rejection by improperly assuming the missing elements are inherent or obvious. These assumptions are believed to be based upon hindsight gained from the present application, are therefore improper, and consequently the rejections should be withdrawn. (Claims 25-28 are discussed below.)

With respect to the obviousness rejection of claims 11 and 23 under 35 U.S.C. 103(a), the cited Dallas Semiconductor data sheet does show a three pin integrated circuit. However, to connect the memory as shown in Bobry's Figure 14 would require at least an additional two pins for the circuit: When the input, output, power and ground connections are included, this results in a minimum of five pins, again assuming a combined input/output pin in Bobry, which is not disclosed. To use a three pin structure would require changing the pin connections and functions in a way which is neither taught nor suggested by either the Bobry or the Dallas Semiconductor references. The Office Action again appears to be improperly interpreting based upon hindsight gained from the present application. Therefore, the rejection of these claims under 35 U.S.C. 103(a) is respectfully submitted to be in error based upon this reason, as well as in that Bobry does not disclose or suggest incorporating the memory 46 of its Figure 14 into an integrated circuit.

Concerning claims 7, 18, and 24 are also rejected under 35 U.S.C. 103(a), the Office Action states in its Response to Arguments that the "delay circuit taught by Armstrong is the very kind of circuitry necessary to provide the multiplexing functionality clearly taught by Bobry." However, in its discussion of claim 2 in the Response to Arguments, the Office Action states that: "Applicant notes that Bobry does not disclose multiplexing circuitry. However, the Examiner responds that such circuitry is inherent to achieve the described functionality of the Bobry invention." These statements are contradictory. As noted above in the discussion of claim 2, not only is the functionality not disclosed, it is also not inherent, as seen in the comparison between Figures 2 and 3 of the present application. The Office Action is adding circuitry for a functionality not present in the cited references, but only improperly assumed. Therefore, these claims are additionally believed allowable for these reasons.

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Claims 25-28 were added in the previous Amendment and each contain a limitation not found in their base respective underlying claims. These are rejected by the Office Action under 35 U.S.C. 102(e) with the statement "The limitations of these claims are anticipated by Bobry as shown above." In fact, the referred to preceding comments are those made in the first Office Action before these claims were added so that the limitations of these claims are nowhere discussed in the Office Action, either "as shown above" or elsewhere in the Office Action. Furthermore, the limitations of these claims are not found in Bobry.

Claims 25-28 are drawn to the particular embodiment where the sound output has been previously recorded in the memory array by use of the speaker. This ability to use the speaker as an input to record sound in the memory array of the integrated circuit which can then be played back through this same speaker when activated, again through the use of this speaker, is described, for example, in the Summary of the present application on page 3, lines 10-21: "The movement of the speaker diaphragm generates an input signal that activates the system function, for example, by activating playback of a previously recorded signal." Such a process is not found in Bobry and it is respectfully submitted that a rejection of these claims under 35 U.S.C. 102(e) is without foundation and should be withdrawn.

As with claims 25-28, new claims 29-36 are also drawn a circuit and method where sound may be recorded and played back through the same input/output pin in response to a single also supplied through this input output pin. This is again a process neither described nor suggested in Bobry or the other cited references.

For any of these reasons, reconsideration of the Office Action's rejection of claims 2, 4-9, 11-28, and consideration of new claims 29-36, is therefore respectfully requested, and an early indication of their allowability is earnestly solicited.

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and 11-28, were rejected. Claims 2, 4-6, 8-9, 13-17, 20-21, and 25-28 were rejected under 35 U.S.C. 102(e) as being anticipated by Bobry, U.S. Patent No. 5,593,236, with the remaining claims rejected under 35 U.S.C. 103(a) over Bobry in view one of several additional references as noted below. For the reasons stated below, all of the pending claims are believed to be allowable. Additionally, new claims 29-36 have been added. Consequently, a Request for Continued Examination is being filed concurrently with this Amendment.

These Remarks will discuss the various claims in the same order in which they occur in the Office Action. First the 35 U.S.C. 102(e) rejection of the various non-cancelled original claims is dealt with, followed by some comments on the 35 U.S.C. 103(a) rejections. The claims added in both the previous and the current Amendment are then discussed.

Claim 2 recites "a multiplexing circuit coupled between the first terminal and the output and input circuits." As discussed in the previous Amendment, this is not present in the Bobry patent. This is also admitted in the Response to Arguments section of the present Office Action:

> Applicant notes that Bobry does not disclose multiplexing circuitry. However, the Examiner responds that such circuitry is inherent to achieve the described functionality of the Bobry invention.

This is respectively submitted to in error, as can be seen by comparing Figures 2 and 3 of the present application. The difference between these two figures is described beginning on line 3 of page 8 of the application: "Interface 300 differs from interface 200 primarily in that interface 300 *does not include multiplexing circuitry* [230 of Figure 2]...". As shown by the added emphasis, not only is the multiplexing circuitry not inherent, but, as described on page 8, lines 3-18, the present invention describes the operation of Figure 3 which explicitly lacks this circuitry, thereby contradicting the asserted inherence.

Concerning the use of a single pin, Bobry does show a single pin connected to speaker, but nowhere does the Bobry patent indicate that only the single pin comes off the integrated circuit. In the Response to Arguments, the Office Action states that this is implicit in the teachings of Bobry. However, as this is not disclosed in Bobry, it is respectfully submitted that the Office Action is improperly interpreting the Bobry patent in light of the present application and improperly using this hindsight to determine that an element absent in the cited reference must be implicit therein.

Thus, the Office Action has again rejected claim 2 based upon 35 U.S.C. 102(e) despite claim 2 containing features which are admitted in the Response to Arguments

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